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# **SCREW-WORMS**

## **HOW TO RECOGNIZE AND CONTROL INFESTATIONS IN LIVESTOCK**

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Further information on insect pests of livestock can be obtained from your county agent, the Agricultural Experiment Station in your State, or the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington 25, D. C.

## SCREW-WORMS

### How to Recognize and Control Infestations in Livestock

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In the South the screw-worm is a serious pest of livestock and other domestic animals. Screw-worms infest the wounds of these animals, laying their eggs in them, and feeding on the vital tissues, such as muscle, nerve, blood and lymph. When they are abundant, they enlarge the wound, sometimes so rapidly that the animal dies within a week or 10 days.

#### How to Recognize a Screw-Worm Infestation

Wounds that have been infested with screw-worms for 3 days or more give off a distinctive obnoxious odor, and they often bleed, sometimes until the blood drips to the ground. A screw-worm-infested wound can easily be recognized from these two characteristics.

#### Where Screw-Worms Occur in the United States

Screw-worms survive the winter only in the southernmost parts of the United States. From their overwinter breeding places, principally in southern Florida and Texas, from late

spring to early fall the adults spread by flight all over these States and to California, Arizona, New Mexico, Oklahoma, Louisiana, Arkansas, Alabama, Georgia, and South Carolina. In favorable seasons they may fly as far north as Colorado, Kansas, Missouri, Kentucky, and Virginia. Nearly all outbreaks above this zone have been traced to infested animals shipped from the South.

### How Animals Become Infested

It should be remembered that to become infested an animal must have a wound on which the screw-worm fly can lay its eggs. Such wounds usually result from castrating, branding, marking, dehorning, shear cuts, accidental cuts, bruises, or scratches, or bites from ticks or blood-sucking flies. Eggs may also be laid in the navel of new-born animals. Once infested, wounds become much more attractive to female flies, and numerous egg masses and hundreds of larvae of different sizes may be found in the same wound.

### How the Screw-Worm Lives and Develops

The screw-worm is the larva, or maggot, of a blow fly. This fly is deep blue with reddish eyes and faint black stripes on its back, resembling a bluebottle fly.

The screw-worm fly lays eggs in shinglelike masses, gluing them to the

animal's skin at the edge of the wound or to any scab on the wound. Each mass contains about 200 eggs.

The eggs hatch in 12 to 24 hours, and the young larvae invade the wound, feeding close together and forming pockets in the flesh. They feed with the pointed end, or head, downward and the rear end exposed for breathing. From 5 to 8 days later, when they are full grown, they crawl out of the wound, drop to the ground, burrow into the soil, and change to the pupal, or resting, stage. After about a week, or longer in cool weather, the adult flies emerge from the pupal cases, and 5 days later they mate and the females are ready to lay eggs for the next generation.

### How to Prevent Outbreaks in the North

In the course of shipping, injuries caused by improper handling or by striking the animals, as with iron rods or whips, may become infested before the animals leave an infested area. Screw-worms may thus be spread to distant uninfested localities, where livestock owners may not be familiar with control measures, and thereby cause losses to the local livestock industry. Many such outbreaks have occurred in the North Central States in recent years, some involving many thousand animals. In addition to the loss of the animals, these outbreaks have cost untold amounts in labor and

material in attempts to control or eradicate the pest.

To prevent screw-worm outbreaks in the Northern States, every shipment of animals from an infested area must be carefully inspected immediately before shipment, upon arrival at its destination, and daily thereafter for at least 1 week. It is desirable to treat all wounds with smear 62<sup>1/</sup> before the animals are loaded and at rest stops along the way north. If these practices are followed and enforced, the worms will be destroyed before they have a chance to complete their development and leave the animal.

If screw-worms are found in animals that have been shipped to any northern locality, this discovery should be reported immediately to local officials, so that through the co-ordinated effort of local, State, and Federal agencies steps may be taken to eradicate the pest. If this is not done promptly, it will soon spread to other herds and cause serious trouble before it is killed by winter weather.

### How to Prevent and Treat Infestations

Since a screw-worm infestation will always injure the animal, and may kill it, it is very important to prevent

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<sup>1/</sup> For a description of this treatment see U. S. Bur. Ent. and Plant Quar. E-708, revised Jan. 1947.  
[Processed.]

such infestations. Therefore, if at all possible, avoid making any wounds--that is, do not mark, brand, dehorn, castrate, shear, or dock livestock--during the season when screw-worm flies are present. Carry out these operations late in the winter or early in the spring.

If such wounds must be made during the screw-worm season, treat them with smear 62. This material kills not only the worms but some of the germs, and also deodorizes the wounds so that they are less attractive to other flies. In the South smear 62 is widely used in shear cuts and other wounds to prevent screw-worm infestations. It is also applied to the navels of all new-born calves, pigs, lambs, and goats.

Apply smear 62 preferably with a 1-inch brush. If the wound is already infested, swab the smear deep into all the crevices made by the worms, and paint over the entire area covered with blood or wound exudate. Hold the animal securely to keep it quiet during the treatment. If the wound continues to bleed, stay with the animal until most of the bleeding has stopped and then apply another coat of smear before releasing the animal.

It is not necessary to remove the dead screw-worms from a treated wound. However, they will disintegrate or drop out in a day or two, carrying much of the protective smear with them. Therefore, apply a second treatment from 1 to 2 days after the first, and then twice a week until the wound is healed.

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